Treatment effects (improvements in HbA1c, hypoglycemic event rates and changes in body weight) and cohort characteristics (mean age 61.6 years, diabetes duration 13.2 years, HbA1c 8.2%, BMI 29.8 kg/m2) were taken from PREDICTIVE and supplemented with Sweden specific patient data. Costs were retrieved from published sources and expressed in 2005 Swedish Kronor (SEK) from both a third party payer and societal perspective. Total costs were projected over a 50-year time horizon and discounted at 3% per annum. **RESULTS:** Over patient lifetimes IAsp treatment was associated with lower mean direct medical costs per patient of approximately SEK 8,248 per patient versus HI (SEK 405,910 ± 16,358 versus SEK 414,158 ± 15,544 respectively). Savings were due to reduced costs associated with diabetes-related complications for IAsp compared to HI (difference SEK 14,886) despite increased treatment and patient management costs (difference SEK 6,641). Including indirect costs in the analysis increased the cost savings associated with IAsp treatment to approximately SEK 10,717 (SEK 521,538 ± 22,106 versus SEK 532,226 ± 21,342). **CONCLUSION:** Over patient lifetimes, IAsp treatment was projected to result in overall cost savings compared to HI when accounting costs from both a health care payer perspective and from a societal perspective in the Swedish setting.

PDB48

A RETROSPECTIVE ANALYSE OF THE IMPACT OF INCREASING BODY MASS INDEX ON MEDICAL RESOURCES FOR PEOPLE WITH TYPE 2 DIABETES IN UNITED STATES

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OBJECTIVES: The aim of this study was to investigate the annual use of medical resources (outpatient visits and current drug use) and lost productivity (days off work) for people with T2D with increasing BMI. **METHODS:** A retrospective analysis was conducted in United States based on a sample of T2Ds from the Adelphi Metabolic Syndrome Disease Specific Programme (a large cross sectional study) in 2006 with 643 people diagnosed with T2D, aged between 35 to 64 years and a BMI°Ý 20 kg/m2 (based on physician reported height and weight). People were stratified according to their BMI; normal/overweight (20–29.99 kg/m2; n = 110), obese (30–34.99 kg/m2; n = 178)); very obese (35–39.99 kg/m2; n = 170) and morbidly obese (>39.99 kg/m2; n = 185). The cohort had an average age of 53 years, 58% male, and 69% Caucasians. **RESULTS:** For people with T2D who was normal/overweight, mean number of total drugs used for any condition was 4.7. The number of annual visits to health professionals (PCP, cardiologist, diabetes specialist, diabetes nurse, other doctor/nurse) was 5.9. The rate ratio i.e. the mean resource utilization relative to the utilization in the normal/overweight group for people with T2D who was obese, very obese and morbidly obese, respectively, were 1.08, 1.15, and 1.32 for total drug use, 1.75, 2.37, and 3.37 for percentage of people using more than 2 diabetes drugs, and 1.21, 1.31, and 1.39 for annual number of visits to health professionals. People not retired had an average annual number of days off work due to CV or diabetes complications of 1.5 for the normal/overweight group, with 3.2 for the obese group. **CONCLUSION:** These findings suggest a positive correlation between BMI and medical resources. The impact of obesity on resource use is particularly evident in people with T2D in the high obesity groups.

PDB49

ESTIMATE OF HEALTH CARE RESOURCES NEEDED TO INITIATE INSULIN—RELATIVE COSTS OF DIFFERENT OPTIONS IN UK CLINICAL PRACTICE

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OBJECTIVES: In the UK, the role of insulin initiation has traditionally been one for specialist (secondary care) diabetes teams (SDT) but this trend is changing with primary care increasingly taking a leading role. In order to appropriately plan services, all relevant costs need to be considered. This analysis compares the estimated costs of insulin initiation using different models of service delivery—combinations of primary vs secondary care initiation and group vs individual sessions. **METHODS:** Using published UK literature, the resources used for 4 different service models were estimated, associated unit costs attached and total costs estimated over the first 3 months of insulin therapy. **RESULTS:** In the secondary care led models, average costs were £221 per person for an individual start over the 3 month period. As expected, estimated costs for group start sessions were lower than for individual starts (average £187). In a primary care initiation model, the average per patient costs were only slightly lower (£139 individual start, £190 group start). These costs are higher than the costs of the insulin therapy over the same time period (average £120) and key cost components were resources of associated health care professionals (HCP) and length of sessions with the relevant HCP, commonly assumed to be a diabetes specialist nurse **CONCLUSION:** Details of the range of resources used at the point of insulin initiation are not readily available in the literature. This analysis suggests that significant resources are required compared with the medication costs over this initiation period. The amount of time spent with the range of appropriate HCPs is the key driver of cost. Many other factors need consideration when deciding upon appropriate service models including the experience of the HCPs, the complexity of the insulin regimen and the degree of self-ownership and satisfaction by the patient.

PDB50

UTILIZING OF CLAIMS DATABASES FOR IMPROVEMENT OF PRESCRIPTION HABITS FOR DIABETES MELLITUS TYPE 2

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OBJECTIVES: In the long term there is a high rate of sulphonylurea (SU) prescription on oral antidiabetics (OAD) in Slovakia compared to DM treatment standards in other countries. Although this rate is decreasing slowly, there is a need to force the prescription habits improvement in diabetic patients. Our objective was to use collected data and analyse prescription habits of diabetologists with a focus on SU and biguanides rate. **METHODS:** We used claims data of reimbursed medicines in 2005 of one Slovak health insurance fund. Diabetic patient was identified as the one with at least two prescriptions regarding DM diagnosis on annual basis. SU rate compared to the total SU and metformin prescription was calculated for each diabetologist on the basis of expenditure in DDDs. **RESULTS:** We identified 13,481 diabetics (7% of total DM patients undergoing pharmacotherapy in Slovakia). These patients were treated by 212 diabetologists. Average SU verus biguanides rate was 59%. Worldwide, this rate stands for approximately 40%. This difference requires further steps so the doctors were categorized in deciles for purposes of targeted audit. Furthermore, we calculated the savings if patients would go to biguanides instead of SU. **CONCLUSION:** Claims data are an effective tool for auditing of

prescription habits. Our study confirmed the difference in prescription habits and results should be disclosed to prescribers. Mutual co-operation of health insurance and specialists on similar analyses and quality indexes specifications has a great potential to change the treatment patterns and could lead to significant savings when followed by direct feedback and education.

DIABETES—Health Care Use & Policy Studies

PDB51

DRUG USE FOR DIABETES MELLITUS TYPE 2 AND ITS COMPLICATIONS IN SLOVAKIA

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OBJECTIVES: Diagnosis of diabetes mellitus is the 4th in drug spending in Slovakia. Our objective was to explore drug costs for diabetes and pharmacotherapy break down costs on antidiabetics as well as the complications or co-morbidities prevalence and treatment. Drug consumption was compared for diabetic and non-diabetic patients. **METHODS:** We used claims data of reimbursed medicines in the y.2005 of one private health insurance fund. Diabetic patient was identified as the one with at least two prescriptions regarding DM diagnosis on annual basis. We compared prescription on the ATC3 level in costs and also in DDDs for diabetic and non-diabetic patients regarding the age group (analysis done for each age decade). **RESULTS:** We identified 13.481 diabetics /DM/ representing 7% of total diabetic patients undergoing pharmacotherapy in Slovakia. All other policyholders with prescriptions were included into the control group /non-DM/. The highest number of diabetic patients belongs to the age group of 50–59. Average annual drug cost per patient was: 655 EUR for DM versus 127 EUR for non-DM, what represents about 355% higher costs for DM. In drug costs of DM2 treatment antidiabetics represent 33% and other pharmacotherapy stands for 67%. Three leading ATC3 in reimbursed costs per diabetic patient were: C10A, C09A and A16A. The main differences in drug use prevalence except antidiabetics occur in the following drug groups: C09A ACE plain inhibitors (50% of DM versus 10% of non-DM with prescription); B01A antithrombotics (46% DM versus 9% non-DM) and C10A cholesterol and triglyceride reducers (40% DM versus 6% non-DM). **CONCLUSION:** DM diagnosis implies a relevant economic impact. Besides diabetics, the main cost driver is a cardiovascular treatment. This analysis will be followed by evaluation of the rationality in the prescription among diabetologists and could be the base for other pharmacoeconomic studies.

PDB52

FACTORS ASSOCIATED WITH THE CHOICE OF A GLITAZONES OR SULFONYLUREA AS ADD ON TO ONGOING METFORMIN MONOTHERAPY

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OBJECTIVES: To assess the differences between patient characteristics of Type 2 diabetic patients that add sulfonylurea (SU) vs. glitazone(PPAR) to ongoing metformin(MF) to attain adequate glycemic control in the real life practice settings in UK. **METHODS:** Retrospective clinical chart review and patient survey at the point of visit were conducted among patients aged °Ý30 year at time of diagnosis of T2 DM and added a SU or PPAR to MF mono-therapy in UK from Dec 2006 to Jan 2007. The information of each patient on HbA1c, medication use, co-morbid conditions was collected for the 7-month baseline period (on MF monotherpy) and the minimum a year follow-up period (since the addition of SU or PPAR to MF). **RESULTS:** Data from 412 patients (52% initially added SU to MF and 48% added PPAR) was collected. For the SU+MF and PPAR+MF groups respectively: mean age on MF alone was 60.8(SD = 11.2) and 59.6(SD = 11.8) years; age at diagnosis was 56.2(SD = 10.8) and 54.5(SD = 11.7) years; A1C prior to addition of SU or PPAR was 8.6(SD = 1.5) and 8.6(SD = 1.4); The following variables between the SU+MF and PPAR+MF groups respectively showed significant differences between the two groups: Weight 85.8 kg (SD = 18.9) and 90.1 kg (SD = 19.0); BMI was 30.4 (SD = 6.5) and 31.8 (SD = 7.0); % with Ischemic Heart Disease was 25.7% and 16.6%; % with MI was 11.8% and 5%; mean total cholesterol was 5.09 mmol/L (SD = 1.1) and 4.7 mmol/L (SD = 1.1); mean LDL was 2.8 mmol/L (SD = 1.0) and 2.5 mmol/L (SD = 1.1). Adjusted logistic regression showed that a lower total cholesterol value (OR = 0.71 95%CI = 0.58–0.87) was associated with PPAR added to MF compared to SU patients. **CONCLUSION:** In this study population half of the patients added PPAR to ongoing MF monotherapy. Patients adding PPAR to MF tended to have lower cholesterol levels.

PDB53

AN EVALUATION OF TREATMENT DISCONTINUATION PATTERNS IN PEOPLE WITH TYPE 1 AND TYPE 2 DIABETES SWITCHED TO ALTERNATIVE SHORT ACTING INSULIN REGIMENS IN UK GENERAL PRACTICE

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OBJECTIVES: Treatment discontinuation may occur from a variety of reasons. The purpose of this study was to characterise treatment discontinuation in people who used either insulin lispro, other short acting insulin (SAI) analogues', or soluble regular human insulin (RHI). **METHODS:** Data were extracted from the GPRD, a resource that describes the primary care histories of around 7% of the UK population. Subjects were selected having been treated with one SAI. Cox proportional hazard models (CPHM) were used to determine relative treatment duration since these data were censored. A variety of covariates were considered. **RESULTS:** We identified 7,958 subjects: 31% SAI analogue, 25% lispro and 44% RHI. Of these, 68.2% had T1DM. In type 1 diabetes (T1DM) the mean age was 36.4 years (sd. 17.6) years with 45% female. In T2DM, the mean age was 55.8 years (sd. 13.7) with 46% female. Regarding type 1 diabetes; the median treatment duration with a SAI regimen was 11.6 years. Relative to RHI, the hazard ratio (HR) of discontinuation was 24.6% worse using other SAI analogue regiments ($p < 0.001$), and 25.1% better with lispro ($p < 0.001$). Gender—being male—was the only other significant factor (HR = 0.798; $p < 0.001$). Regarding type 2 diabetes; the median treatment duration with a SAI regimen was 5.6 years. Relative to RHI, the hazard ratio (HR) of discontinuation was 21.1% worse using other SAI analogue regiments ($p < 0.008$), and 25.7% better with lispro ($p < 0.001$). Age at SAI regimen initiation was the only other significant factor in the T2DM discontinuation model (HR = 1.011; $p < 0.001$). **CONCLUSION:** There was a discernable pattern to treatment discontinuation in people treated with alternative SAI regimens. Insulin lispro resulted in less likelihood of switching treatment. Gender was an important predictor of treatment discontinuation in T1DM and subject age at initiation in T2DM.